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DEVOTED TO MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

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SCARLATINA, VEL FEBRIS RUBRA,— SCARLET, OR FEVER.

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[Reported for this Journal.]

THIS disease is so denominated, from the peculiar floridness of the skin incident to it. The first of these terms is Italian, and has been much objected to by the sticklers for a purely classical nomenclature, as a barbarous interpolation. For it, the second is one of many titles which have been proposed to be substituted. But neither this nor any other I have met with, has been happily selected—the whole being founded on a single appearance, and which is not a uniform one, or existing sufficiently expressive of the nature of the disease.

Doubtless, scarlatina is of modern date. Certain passages have been cited from some of the ancient writings, thought to refer to this, and its affiliated affections, which, on a more careful examination, will not bear such an interpretation. Its introduction into Europe, is commonly traced to an importation from Africa, and is said to have first broken out in Spain in 1610, whence it spread to Naples, where it prevailed eight years afterwards as an epidemic, with unexampled violence—fifty thousand persons having died of it in that city, and half a million in the Neapolitan and adjacent territories before its cessation.

By Sydenham, and subsequently Moreton, some account was given of it as prevailing in London in 1689. But so widely do their descriptions differ, that they can hardly be supposed to refer to the same disease, the one representing it to be very mild, and the other as directly the reverse.

In 1735, it made its appearance in New England, gradually diffusing itself, to a greater or less extent, over this continent. Much confusion, however, exists in the history of the disease, owing to the want of a just discrimination in those by whom it is described, and especially at an early period. No distinction is made in most of these accounts between it and measles, or even small-pox, except as to gradation of violence,—and, so lately as the time of Moreton, and even of Watson, the latter of whom wrote about the middle of the last century, the identity of it and measles was maintained. Bateman declares “that Withering’s publication on it in 1778, or rather the second edition of it in 1793, may be considered as the date of the correct diagnosis of the disease.”

No inconsiderable share of attention has scarlatina occupied, and to which it is entitled, being frequent in its recurrences, extensive in its prevalence, and often exceedingly fatal in its ravages.

Nosologists divide it into three forms, which, however, are to be regarded as the same disease,

presented in different aspects. In this state of subdivision, it has received the denominations of scarlatina simplex, scarlatina anginosa, and scarlatina maligna, the two latter sometimes also called cynanche maligna, or cynanche putrida, and the last, in our own language, malignant or putrid sore throat. It is unnecessary to enter into any discussion to establish the identity, except as to degree of severity, of these three forms. Cullen, I think, has satisfactorily effected this, when designing to prove the contrary. Endeavouring to show, that scarlatina anginosa, and cynanche maligna, are specifically different, he has proved their sameness. The several states of the disease, may prevail simultaneously even in the same family. Thus, when one child has scarlatina simplex, a second may be affected by scarlatina anginosa, a third with scarlatina maligna,—and hence, the common origin of these varieties, may be inferred. By the late Professor Gregory of Edinburgh, who had seen it, this has been stated, and I believe, that similar occurrences are not very uncommon, having met with them myself. The several grades of the disease are related to each other, as distinct and confluent small-pox, typhus mitior and gravior, or as autumnal fever in its several modifications. Discerning no more reason, therefore, for thus dividing scarlatina, than most other diseases, which are equally marked by gradations of violence, or occasional deviations in some prominent symptom, or affection, I shall disregard the accustomed arrangement, and treat of it as phlogistic or congestive, conceiving this to be a much more simple and correct distribution of the subject, and particularly as concerns practical convenience.

An attack of the first, or inflammatory description of the disease, is mostly preceded by gastric disturbance and præcordial anxiety, lassitude and weariness, some uneasiness of the head, and depression of spirits, chilliness, pains in the loins and limbs, followed by fever, with more than ordinary heat of surface, and acceleration of the pulse. Contemporaneous, or nearly so, with these phenomena, soreness of the throat, rigidity of the jaws, and difficulty of swallowing, are sometimes, though not invariably complained of, and where such exist, redness, and swelling of nearly the whole of the lining membrane of the fauces, may be perceived. These affections progressively increase as the case becomes more developed—the fever being higher, the pulse more vigorous and rapid, the pain of the head, especially in the direction of the frontal sinuses, aggravated, the temperature of the skin so raised as to amount, in some instances, to one hundred and eight, or even to one hundred and ten degrees of Fahrenheit, according to Currie and Willan. Nausea, or vomiting, or both,—considerable tenderness of the epigastrium, and more præcordial uneasiness, with jactitation and delirium, or tendency to it, are apt to take place, especially on the

exacerbation in the evening, which commonly happens.

Examining the throat at this time, where the anginose state is prominent, the affection of it will be seen to have correspondently augmented, the velum pendulum palati, uvula, tonsils, and, in short, the whole of the fauces, more intensely florid and tumefied, which state extending up the Eustachian tubes, hearing is impaired, with often severe earache. Considerable as the difficulty of deglutition may be, it is not so great as might be supposed, and seems to be owing more to an affection of the muscles subservient to the process, than the throat itself. The tongue, which nearly from the beginning is furred, now presents clean polished edges, with a thick, tenacious coating of the root and centre, and in some instances, florid elongated papillæ projecting through the encrustation, resembling a sort of vegetation,—while, on other occasions, I have seen it perfectly clean, and of a fiery red appearance.

Commonly, the eruption appears at the close of forty-eight hours, though in the anginose cases, it is more delayed, and may be to double this period. In some cases, however, its occurrence is exceedingly sudden, with scarcely any premonition. It comes out first on the face and neck, thence successively on the trunk and extremities, and becomes very conspicuous about the loins, bendings of the joints, and on the hands and fingers, which are stiff and swollen. In the simple variety of the disease, especially, the eruption often appears also on the surface of the interior of the mouth, the palate and fauces, of the same speckled or punctated character as that of the exterior, by which circumstance, and the absence of tumefaction, it may be distinguished from the real anginose affection. As to the diffusiveness of the exantheme, there is great difference, sometimes it being nearly universal, and at other times partial, or in patches. It consists of a multitude of small points, at first of a pale or dingy red, gradually assuming the scarlet hue, which spread, and apparently coalesce, so as to exhibit a blush of a more or less extent, of so deep a colour as to "resemble that of a boiled lobster,"—the comparison used in one of the best descriptions of it. Yet carefully examined, the efflorescence will still be perceived to be made up of specks, shaded off, from the centre to the edges.

The skin continues hot, and is itchy, sore, and somewhat swelled. Not very sensibly influenced is the fever by the appearance of the exantheme; sometimes, however, it abates, with great relief to the stomach and head, though as often it is otherwise, and may be exasperated. It usually remains in some degree till the desquamation is completed, which may be very tardily performed. The eruption, as well as the affection of the throat, is also very much controlled by the fever, which early abating, each is moderated, and more speedily subsides. But where it is maintained, the reverse happens, and the throat especially, becomes worse. The swelling is greater, and on its surface apthæ may appear, sometimes ragged and irregular, soon degenerating into ash-coloured sloughs, or an exudation of lymph takes place, in small portions, or so extensively, as to form an adventitious pellicular covering. In some cases, the inflammation, and

its consequences, spread to the windpipe, productive of a variety of croup. But the result promising to be favourable, the sloughs, as well as the membrane, separate and are detached about the eighth or tenth day, leaving the surface beneath clean and healthy, and convalescence is confirmed.

What has been said is applicable to an average of the inflammatory state of the disease. But it is sometimes infinitely milder, and with little or no affection of the throat,—while, on other occasions, it presents a far graver and complicated aspect, all the symptoms, general and local, being highly exasperated.

Congestive scarlatina, though retentive of the common characteristics of the disease, these receive the complexional hue, which is always bestowed by the operation of the typhoid influence, or condition. Commencing with many of the initiatory phenomena noticed under the preceding head, the peculiarities of this mode of attack are soon manifested. For the most part, reaction is exceedingly feeble or imperfect, and may not at all take place. The collapsed state is marked by a weak pulse, cold skin, doughy countenance,—the head rather stupid than aching,—the stomach dreadfully distressed, the respiration laboured, with deep sighing,—the whole attended by extreme debility, and a disposition to syncope. It may, however, happen, that after a while, the system emerges from under such heavy oppression, or it being originally less, some vigour is displayed, by a full, soft, compressible pulse, an intensely hot, dry surface, amounting even to the *calor mordax*, with pain in the head, suffused eyes, turgid countenance, tenderness of the epigastrium, or of a lower portion of the abdomen, accompanied by vomiting or purging, or both. But this excitement, usually evanescent, is succeeded by a sudden and alarming prostration of vital power.

Be the early stage as it may, the subsequent career of these cases does not materially vary. As they proceed, the typhoid condition becomes more confirmed. The tongue, at first heavily furred, is now thickly coated of a dark brown colour, at the root and middle, with the vegetations formerly mentioned, while the edges are red, clean, and dry. The face is bloated, and may be livid, the eyes fatuous as in inebriation, the intellectual faculties depraved by low delirium, attended by nervous tremors and automatic motions of the hands. Excepting the brain be deeply implicated, when the pulse is slow, it is very rapid and weak, and the stomach evidently suffers sometimes, without vomiting, its powers being so paralyzed, as it were, as to prevent it, though its contents, consisting of a dark flocculose fluid, are ejected by a sort of spasmodic effort of the diaphragm analogous to singultus. More generally in this modification of the disease, are the pulmonary organs involved. Early betrayed by cough and hoarseness, with defluxions from the eyes and nostrils, these are speedily followed by very embarrassed breathing, with wheezing and rattling from the immense secretion of vitiated mucus. In the state of excitement which has been noticed, though the eruption may come out very quickly, even earlier than in the inflammatory form of the disease, it is more frequently postponed to a longer period, alternately

appears and recedes, is in patches of a pale, rapidly changing to a mahogany, or livid, or purple colour, forming the scarlatina purpura of writers,—in some instances becomes widely diffused, and in others, it never appears. The same may be said of the anginose affection. During the prevalence of the disease in the winter of 1834, in this city, more than a dozen cases came under my observation, and in one family three persons, whom I attended with Professor Jackson, without either affection. Each of them sunk in a few hours, under the oppression of the early or collapse stage. These cases were known to be scarlatina, from the disease, unequivocally developed, co-existing in the same house. Commonly, however, the throat seriously suffers, and very often independently of the skin. The epidemic to which I have just alluded, abounded in such examples, as well as of the contrary, or the efflorescence alone appearing.

In the character of the local affection, there is some difference from that of the inflammatory disease. Equally pervading, less tumefaction, however, prevails, and it is of a darker complexion. Much more apt, too, is the surface to be covered by a membrane. But here, it is usually thick, soft, and pultaceous,—and, should apthous ulceration exist, this very rapidly and widely spreads, and becoming gangrenous, discharges an acrid, ichorous fluid, which passing out of the mouth or nose, or both, excoriates the parts it touches, and the *factor oris* is excessive. Concomitantly the voice is hoarser, the respiration extremely oppressed, deglutition more difficult, with increased rigidity of the jaws, and there is a constant though ineffectual effort to disengage and bring up the irritating matters. This state of things not being arrested, heavy stupor supervenes, with sometimes petechiæ or vibices, and passive hæmorrhage, or colliquative diarrhœa, the pulse so diminutive as scarcely to be felt, and finally death takes place from absolute exhaustion, if not more abruptly by some cerebral, laryngeal, or pulmonary affection.

The duration of the disease, is from a few hours to ten or fifteen days, according to the nature of the attack, being in this respect subject to many deviations. Going through its career with regularity, and mildly, it will be mostly found, that on the fourth day it has attained its height, on the fifth the efflorescence begins to decline, on the sixth it has nearly faded, and on the seventh entirely gone, leaving the skin dry and scaly. In some rare instances, however, which have been recorded, there has taken place just in anticipation of the disappearance of the rash, an eruption more or less vesicular or pustular, sometimes resembling varicella, and on other occasions, variola so closely, as to have been denominated *scarlatina varioloides*. No such instance have I ever met with, and whether it be the consequence of the original disease, or a distinct affection developed on the subsidence of the preceding one, I cannot say.

From scarlatina generally prevailing as an epidemic, its production has been assigned to the occult and mysterious agency of such diseases. But however its propagation may be promoted or its character affected, by an influence of this kind, there can be little doubt that its immediate cause is a specific contagion, conforming in this and other

respects to the diseases to which it is most closely allied. Exactly like these, it destroys the susceptibility to a second attack. By Withering and Willan, this is positively asserted, they never having witnessed an instance to the contrary,—and Bateman states, that the fact is fully ascertained and accredited. Nevertheless, the infallibility of the protection has been denied, and examples of failure are cited by respectable writers, among which is Richter, who avers that a second, and even a third repetition of attacks, have been noticed. Conceding this, it still rests on the same footing as variola, and other diseases of acknowledged contagiousness. It is questionable at what stage scarlatina acquires this property, prior or subsequent to the eruption. But many believe, that it is most active during the desquamation, and at all events, it seems to retain it till this process is completed, the scales being impregnated with the virulent secretion of the skin. Yet we are told that the disease cannot be propagated by inoculation with matter procured from this or any other source. Contrary statements have been made, I am aware, though resting on no good authority. To *fomites* of various kinds, it adheres very tenaciously for a long period, with an entire preservation of its efficiency, in proof of which we have some striking facts. Thus, my friend Dr. Percival, of Dublin, imputes the introduction of scarlatina into that city, to a box of toys from London, which had been exposed to the contagion. That the disease was propagated in this way, however, is hardly to be credited,—and the story seems to me very like the famous report of Hilderbrandt, who assures us that as soon as he arrived in Podolia, scarlatina broke out and spread most widely, which he ascribes to the retention of contagion in a coat he had worn in the disease a year previously in Vienna. Nevertheless, the long continuance of infection in apartments where the disease has existed, though every purification be practised, is unquestionable. It is stated by Professor Elliotson, in confirmation of it, that all the children admitted into a particular ward in a hospital under his care, were seized with scarlatina for nearly two years in consequence of a patient with the disease having been in the ward at that remote period, and this in despite of white-washing and other cleansings.

Extraordinary as this may appear, it is by no means incredible, and is supported both by some further facts and by analogies.

Not to refer to other instances, in the spring of 1834, I attended a boy in the disease, whose parents being exceedingly anxious that their children should escape it, had them all immediately sent away. Every article of the furniture of the room was removed, the carpets taken up, the bed emptied of its feathers, the ticking washed, and his clothes destroyed. Besides this, the freest ventilation was practised, and the fumes of the chlorate of lime filled the whole house for several days. Notwithstanding all these precautions, twelve weeks afterwards on the return of the children, three of them became speedily affected through the medium of some domestic fomites in all probability, as they were not elsewhere exposed to the contagion.

Nothing more occurred here, than has been re-

ported again and again of variola, typhus, and even of puerperal fever. Five or six years ago, the latter broke out in the lying-in-ward of our hospital—and though every means of purification was adopted, no sooner was a woman delivered in the ward, than it reappeared, and in a very fatal shape. Each successive year for three terms, was the ward closed against admissions, the process of purification again repeated, and still on the re-introduction of parturient women, after such a protracted interval, the result was the same, and now the ward is abandoned.

As to the sphere in which the contagion of scarlatina operates, we have no precise information. But it may be presumed to be similar to that of variola and the other diseases of the same class, which you will recollect is very limited.

It is said that the incubative period of the contagion is five or six days. My own conviction is, that it is usually greater, though I speak diffidently on the point, having been unable to satisfy myself in regard to it. Equally subjected apparently to infection, I have seen individuals break out with the disease from the third to the eleventh day; and we have had some cases lately reported, where in a family of eight, the interval varied from seventeen to the twenty-sixth day, the average being seventeen days.

No season is exempt from scarlatina, though it is most apt to prevail in winter or spring. But I have seen it during the hottest weather, and indeed at all seasons. Children are chiefly liable to it, as they are to every similar affection, for no other reason probably, than that persons in more advanced life have previously had it. Yet, I have never known a very young infant to take it, however exposed. By Sir Gilbert Blane it is asserted, that he never saw an individual, except one, affected by it turned of forty. But I have met with it several times in people much older, and once with Dr. Dewees, in a very aged man near eighty. It has, too, been remarked as one of the peculiarities of the disease, that on some occasions, it is restricted to children, and on others to adults, and those a little more advanced. Thus Reil declares, that he had witnessed an epidemic scarlatina, which was almost exclusively confined to persons between fifteen and twenty-five.

The difficulty that may exist relative to the diagnosis of scarlatina, must arise chiefly from its occasional similarity to measles. Even here, embarrassment can seldom be experienced, should it be recollected, that in measles, the symptoms are more conspicuously opthalmic, catarrhal, or pneumonic; that the eruption comes out usually on the fourth day in blotches somewhat elevated, so that the surface does not exhibit a uniform blush, and that these blotches running into each other assume a crescent shape, the whole being of a faint reddish complexion: while, on the contrary, that scarlatina is preceded by gastric and cerebral derangement—that the eruption occurs in half the time, consisting of minuter specks, seldom at all raised, is infinitely more diffused, and of a scarlet colour. The case being of an anginose nature, all ambiguity ceases; for though the throat is sometimes sore in each disease, it is in a manner so different as not readily to be mistaken. Generally in mea-

sles, it may be perceived to be merely an extension of the exantheme of the surface to these parts. Much reliance may also be placed on the singular appearance of the tongue, and the extreme acceleration of the pulse in scarlet fever.

As bearing an analogy to scarlatina, it may, however, be also mentioned, that an efflorescence frequently with sore throat, is to be met with, especially in children, having the popular title of *scarlet rash*. It differs from it, however, in the first place, in being usually occasioned, obviously, by suppressed perspiration, or disordered stomach from an excess of food, or certain peculiarly offensive articles; and, secondly, by the speedy occurrence of the eruption, without much or any previous ailment, and is rather a blush or suffusion than speckled. But I have seen it, on several occasions, dotted like scarlatina, and owing to some unintelligible cause of a pretty wide prevalence, several of a family being attacked in rapid succession, and still further spreading through the community. This is probably a variety of roseola, which is not contagious, or gives any security against scarlet fever.

In simple scarlatina, little danger is ordinarily to be apprehended. Yet, in some instances, it most unexpectedly becomes alarming, when apparently it had been doing perfectly well, by a sudden sinking of vital energy, or by its being raised into an exasperated state with diverse complications. No disease, indeed, is more treacherous, or requires greater vigilance. Two children whom I attended in consultation on different occasions, died almost immediately after our leaving them,—though at the time of our visits, they appeared to be doing well,—the first in the early, and the second in the advanced stage of the disease.

The other varieties of scarlatina are always to be dreaded; and the malignant condition of it, especially when epidemically prevailing, is occasionally as fatal as the plague itself. Many instances of such mortality have been reported; and among others, is that of its memorable occurrence at Naples already referred to, and those subsequently described by Moreton, Huxham, De Haen, Sims, Fothergill, &c. We are, indeed, told that when it prevailed in Paris, in 1743, so indomitable did it prove, that not a single individual recovered, and numbers perished within the short space of a few hours. But, on the contrary, it sometimes appears epidemically in the character of extreme mildness, as recorded by Moreton, Sydenham, and other authorities.

Feeble reaction with heavy congestions, or intense fever, is unfavourable, though the former more so. Any material deviation in the efflorescence from its common character and order,—the eruption being too early or late,—or alternately coming out and receding,—or its appearance in blotches only,—or an entire absence of, or permanent repercussion of it,—or its having a pale or livid, or mahogany colour,—or its rapidly changing from the one to the other of these hues,—or if attended by petechiæ or vibices, are all of bad import.

It is very unfavourable to have the throat affected, without any eruption, it denoting a concentration

of the disease on the internal organs, and especially when the lesions are extensive, and the aspect dark, with apthous ulcerations. Even more so, however, is the croupy affection of the windpipe, from which recoveries very rarely take place. Nor scarcely less to be dreaded is a deep implication of the nervous system, or a quick, irritated, and feeble circulation. Extreme cerebral, or laryngeal, or pulmonary, or gastric affection,—a gangrenous state of the fauces,—diarrhœa of acrid matter, or copious discharges of pallid urine, with jactation and debility, and an irritated or very weak pulse, indicate indeed, uniformly, the most imminent peril, and mostly prove the immediate precursors of death. By Reil it is remarked, that a white streak passing down on each side of the nose, and encircling it below, is a mortal sign, which, however, I have not seen.

An attack indicates a happy issue, whatever may be the form of the disease, where the eruption comes out in due season, is widely spread, of a bright red, regularly passing through the several stages to desquamation, and the throat being affected, the tumefaction is considerable, and florid, with painful deglutition, and white instead of gray or dark sloughs, the whole attended by moderate inflammatory fever. Every thing, in short, depends on the degree of reaction, the want of which almost invariably proves fatal, and when present, a different result may as confidently be anticipated from skilful management.

BIBLIOGRAPHICAL NOTICES.

Counter-Irritation, its Principles and Practice; illustrated by One Hundred Cases of the most painful and important diseases, effectually cured by External Applications. By A. B. GRANVILLE, M.D., F.R.S., &c. &c. London: 1838. 8vo. pp. 353.

A GOOD work on counter-irritation is much wanted in therapeutics. The name of Dr. Granville, who is a member of most of the scientific societies in Europe, and of the medical section of the British Association, led us to suppose that we should derive much new and valuable information on the subject. The plan and purpose of the writer is not, however, to communicate knowledge to the profession, or to extend the number of valuable remedies; but simply to let the public know, that ammoniacal lotions are an infallible remedy against numerous diseases, from toothache to consumption; not that all ammoniacal lotions are useful, but only such as are prepared in a mode known only to Dr. Granville, and not disclosed by him to the public.

Works of this kind are scarcely known in America. We are not aware that any reputable physician has ever published a work for the non-professional reader, in which a secret remedy is

recommended in terms which, with us, are reserved for the venders of hygiean pills, or anti-syphilitic drops.

If physicians in England do occasionally resort to such disgraceful expedients, to obtain practice and notoriety, we must not conclude that these contemptible tricks are favourably regarded by the more respectable members of the profession. The publication of Dr. Granville has been criticised in just terms of reprobation in the British and Foreign Review, and the editor of the Medico-Chirurgical Review states, that a simple mode of applying ammonia proves equally effectual with the more complicated lotions proposed by Dr. Granville.

The subject is in itself interesting, and the work is, on that account reprinted in the American Medical Library, where it is found associated with some of the most valuable works that have been recently added to medical literature. The ready and powerful action of ammonia gives it some advantages over most counter-irritants, when we desire to act quickly upon a nerve which is the seat of pain, and we think that we are rendering a service to our readers by extracting the mode of using it proposed by Dr. James Johnson.

“Since writing the above we have made several experiments, first on our own persons and afterwards on others, and we have no hesitation in averring that we can enable any man in her majesty's dominions to procure and apply this extremely useful and most valuable counter-irritant. This antidyne is neither more nor less than the *strongest* liquor ammoniæ that can be procured. The liquor ammoniæ of the Pharmacopœia, will not do; but the potent kind may be procured from most chemists. The following mode of application we have found to be the most easy and the most effectual. Fill the lid of a turned wooden pill-box with circular pieces of lint or linen, till it is above the level of the rim, keeping the rim clear. When the antidyne is wanted, pour some of the liq. ammon. upon the lint or linen, so as to saturate the folds. The box is then to be instantly inverted on the part, and held on with firm but gentle pressure. It first feels like a piece of ice—in a minute or less, a sense of heat and tingling is experienced—then a burning heat—and, in from two to five minutes, a blister is raised. In fine, every physiological effect described by Dr. Granville is produced by this preparation. The lid is then to be pressed upon the box, and kept till another application is necessary, when some fresh liquor ammoniæ must be poured over the lint.

Now, we think that this mode of application is infinitely preferable to that recommended by Dr. Granville; viz., wetting a pocket handkerchief, or several folds of linen, by which a great quantity of an expensive article is wasted, and the evaporation is not half so effectually prevented by the napkin, as by the edge of the box, which leaves a dent in the skin like the rim of a cupping-glass, thus

enabling any person to apply the ammonia close to the eye, if desirable, without the least risk of injury to that organ. This mode also prevents the great diffusion of ammoniacal gas through the room, which is very pungent and unpleasant to weak lungs or weak eyes. The only objection to this mode is the size of the box, which is too small, where a considerable surface is to be vesicated or counter-irritated. A wooden box, however, of any size, may be easily constructed;—or, the same box may be re-applied, with almost the celerity of a cupping-glass, and thus vesication or any degree of counter-irritation produced to any extent. The liquor ammoniæ should be kept in a very strong bottle well stopped, and in a wooden case. The bottle should not be more than half filled. We think that no medical man should be without this small but potent remedy, to be applied in cases of emergency, and where violent pain or spasm is to be quelled with celerity. We do not, indeed, believe that the remedy in question will ever prove extensively beneficial in chronic and painful maladies, where blisters or antimonial counter-irritants are now employed. The purulent discharge procured by lytta and antimony, or by setons, will always be more powerful derivatives than the caustic ammonia. But the latter will prove extremely useful in urgent spasms, or deep-seated inflammation of vital organs, where rapidity of agency is of the utmost importance."

Since the above was in type, we have received the London Lancet for October 27th, which contains a letter from Dr. Granville, stating his reasons for withholding at the time the exact ingredients of his remedy, and also announcing them. He considers it was necessary that "a plain and popular exposition of all the principles and facts appertaining to the question of counter-irritation, should be given to the world." This, he thought, could only be effected, and the interest of medicine best promoted, by a work addressed to the general reader, as well as to the profession; and for these reasons he confined himself to a popular view of the matter. He abstained from a specification of the pharmaceutical manipulations, because the strength of the compound resulting from them rendered it, he conceived, highly injudicious to place it indiscriminately in the hands of the non-professional public; and because, "in this manner, he threw the responsibility of the active treatment into the hands of the medical attendant, who alone could determine, according to the exigency of the case under his care, the proportion to be employed." He was of opinion, too, that the physician, with the data given, was competent to determine the requisite proportions. He adds, he never concealed from his medical friends and others who applied to him, the precise formula; that he authorized the chemist who prepared the lotion for him to communicate it to any of the faculty who might apply to him; and that, moreover, he always

intended to publish them himself, at a convenient season. Such is the substance of Dr. Granville's defence. He acted injudiciously, we think, admitting the sincerity of his declaration; but as he has made the *amende* so promptly, we have nothing further to say, but add the formulæ for the preparation of his antidyne.

"Each kind of lotion consists of three ingredients:

- 1st. *The strongest liquor of ammonia*, A;
- 2d. *Distilled spirit of rosemary*, B;
- 3d. *Spirit of camphor*, C.

PRELIMINARY STEPS.

A.

Saturate a given quantity of distilled water, contained in a glass receiver surrounded by ice, with ammoniacal gas, obtained in the usual way from a mixture of equal parts of hydrochlorate of ammonia and recently slaked lime, both reduced to a fine powder. The water may be made to take up nearly 800 times its bulk of ammoniated gas under the circumstances described; its specific gravity will then be about 872, and 100 parts of it will contain thirty-three parts of real ammonia, according to Sir H. Davy's tables. This solution of ammonia will, therefore, be more than three times the strength of the *liquor ammoniæ* of the Pharmacopœia of London, 100 parts of which, at a specific gravity of 960, contains only ten parts of real ammonia. I have, therefore, called mine '*liquor ammoniæ fortissimus*.'

B.

Take two pounds of the tips or small leaves of fresh rosemary, and eight pints of alcohol; leave the whole in infusion for twenty-four hours in a well covered vessel, and after adding a sufficient quantity of water as will just prevent the empyreumatic smell, distil over *seven* pints. The Pharmacopœia of London directs the essential oil of rosemary to be distilled instead with rectified spirit. Such a preparation I found unsuited for my purpose.

C.

To four ounces of pure camphor add two pints of alcohol, so as to dissolve the camphor, which solution should be filtered. The present *tincture of camphor* of the Pharmacopœia of London, contains one ounce more of that substance, and does not harmonize so well with my two other ingredients as the weaker preparation.

The three ingredients, thus prepared, every medical man should keep always ready at hand, in well-stoppered glass bottles, so as to be able to make, extemporaneously, a counter-irritating lotion of any requisite strength, according to the nature of the case requiring that application on extraordinary occasions. But for the ordinary purposes detailed in my work, it will be better to keep both a milder and a stronger ammoniated lotion ready prepared for use.

The milder Ammoniated Lotion.

Assuming the quantity of lotion desired to be divided into *eight* parts, then the proportions of the ingredients will stand thus:

- A—four-eighths,
- B—three-eighths,
- C—one-eighth.

The stronger Ammoniated Lotion.

If the quantity desired be also divided into eight parts, then the proportions of the ingredients run as follow :—

- A—five-eighths,
- B—two-eighths,
- C—one-eighth.

Although the changes of proportion here may be deemed trifling, yet the strength of the lotion is such, that I never employ it, except in cases of apoplexy, and for the purpose of cauterization.

Directions in mixing the Ingredients.

A and B are gradually mixed together. The mixture becomes opalescent and somewhat turbid, and a peculiar, highly-agreeable, ethereal smell is given out, different from the individual odour of either ingredient, although the extreme pungency of the ammonia be still discernible. I have strong reasons to believe that, at this point of the operation, some particular change takes place, which imparts to the mixture of the two ingredients some of its valuable peculiarities as a counter-irritant described in my work; but what that change is, it is not my business to enter upon in this place: suffice it to say, that in a great number of experiments, made with the ingredients separately, (for each of them acts as a counter-irritant on the skin,) and with them combined, the effects were uniformly different; those in the former case being found unequal to the production of those complete results which I trust I have justly promised to the profession. Ammonia alone (however strong) will not give rise to the effects I have described, though it has often stopped internal pain, and produced *small little blisters*; but never has it succeeded in almost immediately producing a full vesication, as I have seldom failed to produce with the two ingredients mixed together, particularly after the third ingredient has been added.

Before, however, that third ingredient is so added, it is desirable to clear the previous mixture, by the addition of a small quantity of alcohol, and to set the whole in a cool place. All the various precautions here mentioned may, upon an emergency, be dispensed with, when an immediate action is required, either to arrest pain or relieve deep-seated inflammation. But for the more delicate uses, particularly for instantaneous vesication, the preparations should be obtained in the manner I have specified.

The lotion must always be kept in bottles with a glass stopper; and their whole virtue depends on the accurate distillation and preparation of the ingredients, as well as on the careful admixture of the latter. The species of ethereal principle formed during the admixture, remains present in the lotion, but it is apt to vanish if the bottle be frequently opened, and then much of the peculiar effect of the counter-irritation is impaired. It is one of the many recommendations of these powerful preparations, that their effluvia, besides being agreeable, are of precisely that nature which is most likely to revive and benefit the patients labouring under diseases that require the application of counter-irritants. The compound camphor liniment is the only known combination of ingredients nearly similar to the ammoniated lotion just

described. But the profession is well aware that the liniment will not produce, and never has produced, the effects I have predicated.

Among those effects, one of the most surprising is that of giving rise, in a space of time varying only between three and ten minutes, and in almost every instance, (if such a result be the desired object,) to as ample and full a vesication as can be expected in as many hours from the best Spanish flies. This is a result which I am not aware has been obtained before in so short a time, except by boiling water, (a remedy not quite so pleasant as the odour of ammonia); and on it, therefore, as well as upon its importance in the treatment of many serious disorders, I do take my stand, as also upon that of arresting nervous and muscular pain, almost immediately, provided it does not depend on structural disease."

The Life of EDWARD JENNER, M. D., F. R. S., L. L. D., &c. &c. &c., with illustrations of his Doctrines, and Selections from his Correspondence.
By JOHN BARON, M. D., F. R. S., &c. &c. 2 vols. London: 1838. 8vo. pp. 624—471.

"THE life of Jenner," a distinguished cotemporary observes, "ought to be familiar as household gods to our young men;" and there are few, we suspect, of any age, who will fail to be benefitted by the contemplation of such high moral worth and intellectual eminence as are displayed in every chapter of the history of this great and good man. His generous enthusiasm, his patient industry, and his untiring perseverance, combined with singular candour, a most cautious and philosophical spirit, and a courageous disregard of contumely and ridicule, afford the fairest example of emulation that can be offered to the candidate for future distinction and usefulness. If admiration of solid and brilliant abilities, gratitude for the most splendid discovery of which medicine can boast, and reverence for every quality that ennobles humanity, can arrest the attention and awaken the interest of the reader, this biography of one of the brightest ornaments of medical science, and most illustrious benefactors of mankind, will be sought with eagerness and read with avidity. It is an affectionate, sensible, and well-written tribute to departed excellence. Honored with the confidence of Jenner, during an unreserved intercourse for the last fifteen years of his life, Dr. Baron was peculiarly well fitted to present to the public a faithful delineation of the character and opinions of that distinguished individual; to vindicate his posthumous fame; and to inform the grudging world how infinite and various were his claims to their admiration and gratitude. This task, extremely delicate in many respects, has been executed with singular felicity. The narrative is

spirited, and interspersed with judicious, illustrative, and well-told anecdotes, and the controversial portions exhibit a strictly impartial spirit towards the living and the dead. As most of our readers will, probably, not have the opportunity of informing themselves concerning the life of the discoverer of vaccination by the actual perusal of these volumes, we shall offer them a brief outline of his history.

Edward Jenner was the third son of the Rev. Stephen Jenner, of Oxford, and was born May 17th, 1749, in Berkeley in Gloucestershire, where his father was vicar. His mother was a Miss Head, daughter of a respectable clergyman, and of an old Berkshire family. The family of Jenner was of great antiquity, and had produced several eminent men. At eight years of age, he was sent to a school at Wotton-under-Edge, kept by the Rev. Mr. Clissold. He was subsequently placed under the Rev. Dr. Washbourn of Cirencester, where he made considerable proficiency in the classics. At this early age he displayed his fondness for scientific pursuits, and we accordingly find him collecting nests of the dormouse, and spending his hours of recreation in hunting for fossil shells in a neighbouring oolite formation. On the completion of his scholastic studies he was apprenticed to a Mr. Ludlow, of Sodbury, near Bristol, where he acquired the elements of surgery and pharmacy. At the age of twenty-one, he went to London, and became the private pupil of John Hunter, in whose house he resided. From this moment the closest intimacy existed between these two illustrious men, although the preceptor already numbered twice the years of his favorite student. This intimacy, strengthened by congeniality of temperament and pursuit, exercised, doubtless, the happiest influence on the youthful investigator, and increasing yearly, terminated only with the death of Hunter. In the evening of his days, Jenner continued to descant with all the fervour of youthful attachment on the excellencies of the heart and head of his revered master, whom he generally called the "dear man." His professional studies being finished, he retired to Berkeley, where he soon began to enjoy a larger share of practice and reputation than is usually accorded to one of his years,—still pursuing his favorite study of natural history. On the return of Captain Cook, in 1771, he was recommended by Hunter to Sir Joseph Banks to arrange his vast collection. So ably did he execute this arduous duty, that he was appointed naturalist to the second expedition, which, however, he declined. Between 1773 and 1783, Jenner appears to have been occupied with his practice, the study of natural history,

and convivial amusements. In 1778 he formed a society for the improvement of medicine, to which he contributed numerous valuable papers, all of which appear to have been lost. Among others, were "Observations respecting a disease of the heart, which frequently comes on during an attack of acute rheumatism, and leads to enlargement and disorganization of the part." The loss of this paper he appears especially to have regretted. Being original, it would have established his claim to priority on this pathological point. About this period, Jenner appears to have suffered from a tender disappointment. His friend Hunter, who was the last man in the world to sympathize in a love affair, by way of consolation, recommends him to devote himself to the rearing of hedgehogs. That this novel suggestion was not so efficacious as the naturalist anticipated, may be surmised from the following extract of a letter to his friend Gardner, five years subsequently:

"I am jaded almost to death by constant fatigue: that of the body I must endure; but how long I shall be able to bear that of the mind, I know not. Still the same dead weight hangs upon my heart. Would to God it would drag it from its unhappy mansion! then with what pleasure could I see the end of this silly dream of life."

In 1786, in going from Berkeley to Kingscote, in a severe snow storm, he was very near perishing. About the same period he was sedulously engaged in studying the habits of the cuckoo, the results of which were transmitted to the Royal Society, and published in their Transactions. In 1788, he undertook to prescribe for the relief of his old malady himself,—Hunter's recipe having, we suppose, after an extensive trial, proved utterly inefficacious,—and we find him adopting the most common, if not infallible remedy of matrimony, with Miss Catharine Ringcote. That in this instance the patient was the best doctor, may be gathered from an epistle written to Edward Gardner about a year after his marriage.

"My place of residence, though unfinished, is extremely comfortable; and I can with truth assure you that the last year of my life, dating it from the month of March, has been the happiest, beyond all comparison, I have ever experienced: and I will take it on me to aver (nay, I would swear it) that if you could be lucky enough to connect yourself with a woman of such a disposition as kind fortune has, at least, given to me, you will find a vast addition to your stock of happiness."

In 1792, Jenner finding the fatigues of general practice too much, determined to confine himself exclusively to medicine; and, with that view, obtained a degree from St. Andrew's in 1792. In 1794, he nearly sank under an attack of typhus fever.

While with Mr. Ludlow at Sodbury, the idea of discovering an antidote to the most desolating scourge mankind has ever been afflicted with, appears first to have occurred to him. A country girl, coming to the office for advice, observed, on small-pox being mentioned, "I cannot take that disease, for I have had cow-pox." This casual remark, embodying a popular provincial notion, riveted his attention; and from that time forward he made it the subject of deep and especial contemplation. Communicating his thoughts to Hunter, he was answered in this pregnant sentence—"Do not *think*, but *try*; be patient, be accurate." Amidst all his various studies and avocations he kept this important idea in view, unravelling its intricacies with praiseworthy industry. The history of vaccination becomes now that of Jenner; and our readers have had it recently detailed by so eloquent and graphic a pen, that we should deem it presuming on their patience to do more than present a sketch of its rise and progress.

Impressed with the conviction that the disease communicated from the cow to the human subject was adequate to the prevention of small-pox, he was desirous of determining whether the prophylaxis was capable of being extended artificially from one person to another. Those of his professional friends to whom he had ventured mentioning his hope, laughed at him as visionary; and at this period he was, to use his own language, "the mark at which they all shot." At length an opportunity occurred which enabled him to test the virtue of artificial inoculation with the vaccine virus. Matter was taken from the hands of Sarah Nilmes, who had been casually affected by it, whilst milking, and inserted by two superficial incisions into the arm of James Phipps, a healthy boy of eight years. He went through the disease satisfactorily. It remained yet to ascertain whether it had secured him an immunity against small-pox. On the 1st of the following July this was tested. Variolous matter, freshly taken from a pustule, was inserted in several incisions, but no disease followed. Jenner, delighted with his success, determined to "pursue his experiments with redoubled ardour." This he was prevented from doing for the two next years, on account of the disappearance of cow-pox from the dairies. In June, 1798, he published, in a thin quarto, his "Inquiry into the causes and effects of the Variolæ Vaccinæ," which was dedicated to Dr. Parry, of Bath. About this time Jenner went to London, where he remained three months without being able to procure one person who would consent to be vaccinated, and he returned home in disgust and despair, the object of

his mission unaccomplished. Some of the virus being left with the celebrated surgeon, Mr. Cline, he was induced to insert it into the hip of a patient labouring under coxalgia, by way of counter-irritation. This patient sickened, went through the disease, and was afterwards inoculated with small-pox matter in three different places, which were slightly inflamed on the third day, and then subsided. He was now anxiously solicited to make London the field of his future practice. This, however, he refused to do, alleging his easy circumstances, and limited ambition. "And as for fame," says he, "what is it?—a gilded butt, for ever pierced with the arrows of malignancy."

Jenner was now most violently assailed in different parts of the kingdom, and that, too, by men of the highest rank in the profession. He was denounced as a dangerous impostor, the diffusion of whose pretended discovery would entail the heaviest calamities on the human race; he was even anathematized from the pulpit; and a learned divine endeavoured to prove from Scripture and the writings of the holy fathers, that the vaccine was the foretold Antichrist.

In March, 1799, Jenner came to London. Many distinguished persons were now vaccinated,—among others the children of the late king William IV., then Duke of Clarence. On the 7th March, 1800, he had an interview with the king, and he subsequently went the round of the royal family. The progress of vaccination was now incredibly rapid, and he represents it "as marching over the metropolis, and, indeed, over the whole island." On the 10th August, 1802, he received a letter from the Empress of Russia, signed with her own hand, and accompanied with a diamond ring, expressive of her esteem and gratefulness to him for the discovery of vaccination, and her determination to use her best efforts to introduce it into her empire. In 1802, the British Parliament voted him £10,000, and in 1806 £20,000 more were appropriated. His birth-day was now celebrated, and the corporations of Dublin and Edinburgh gave him the freedom of those cities. His name had become familiar over all the civilized world. Dr. Baron relates an incident which strongly illustrates the greatness of his reputation. A travelling fellow of Oxford being detained at Paris, Jenner was induced to address a letter to Napoleon, requesting his liberation. In the hurry of business, he was about rejecting the petition, when Josephine mentioned the source. "Jenner!" exclaimed the emperor, "ah! we can refuse nothing to that man!" The student was immediately released. Some years afterwards a similar boon was as readily

granted, as well as one by the Emperor of Austria, and another by the King of Spain—acts evincing the highest respect for science, and eminently creditable to those crowned heads.

In 1808, his eldest son died of consumption, and the loss appears to have been keenly felt, so much so as to seriously impair his health. In the same year the National Institute of France elected him a corresponding member, and, in 1811, one of their foreign associates. In 1813, the University of Oxford unanimously, in full council, conferred on him the degree of Doctor of Medicine. During the visit of the allied sovereigns to England, in 1814, Jenner went for the last time to London, on purpose to gratify their expressed curiosity to see him. The following is his own account of his interview with Emperor of Russia :

“I was very graciously received, and was probably the first man who had ever dared to contradict the autocrat. He said, ‘Dr. Jenner, your feelings must be delightful. The consciousness of having so much benefited your race must be a never-failing source of pleasure, and I am happy to think that you have received the thanks, the applause, and the gratitude of the world.’ I replied to his Majesty that my feelings were such as he described, and that I had received the thanks and the applause, but not the gratitude, of the world. His face flushed; he said no more, but my daring seemed to give displeasure. In a short time, however, he forgot it, and gave me a trait of character which showed both great goodness of heart and knowledge of human nature. My inquiries respecting lymphatic diseases, and tubercles, and pulmonary consumption, had reached the ears of the Grand Duchess. She was present, and requested me to detail to her brother, the Emperor, what I had formerly said to her Imperial Highness. In the course of my remarks I became embarrassed. She observed this, and so did the Emperor. ‘Dr. Jenner,’ said she, ‘you do not tell my brother what you have to say so accurately as you told me.’ I excused myself by saying that I was not accustomed to speak in such a presence. His Majesty grasped me by the hand, and held me for some time, not quitting me till my confidence was restored by this warm-hearted and kind expression of his consideration.”

On the 15th of September, 1815, he lost his wife, and this was a source of acute and permanent affliction with him to the end of his days. She appears to have been a most sensible, pious, amiable, and estimable woman, and by her influence and example to have supported him through the most trying period of his life. We find him bearing tribute to her excellence and superior qualities by his delicate and tender assiduities during her last illness, superintending and even administering her medicine and food. His health, never very robust, now became feeble, though he still continued cheerful and as industrious as ever. In August,

1820, being then in his 75th year, whilst in his garden he became suddenly faint, and fell down. From this attack he recovered, though his nervous system appears to have remained in a very irritable condition. He renewed his accustomed avocations, and prosecuted his studies with his wonted ardor. On the 24th of January, 1823, after a busy day, he visited an old friend with apoplexy, and retired to rest as usual. On the following morning, he arose at his regular hour and went down into his study. Not appearing at breakfast, his family became alarmed, and, on entering his office, he was found lying there in an apoplectic fit. Every effort was made to restore him, but in vain; and at three o'clock, on the morning of the 26th, he died placidly. He was buried at Berkeley, beside his wife.

Such is the imperfect sketch we are enabled to give of the life of this eminent man, who has conferred on mankind, by his perseverance and genuine philanthropy, a lasting and inestimable boon, and whose name should be honored by the whole world. He is thus characterized by his biographer :

“Jenner’s nature was mild, unobtrusive, unambitious; and many, who have done justice to his discovery, have still to learn how beautifully the singleness of his heart and his genuine modesty graced and adorned that splendid reputation, which the wonderful consequences of his labours had acquired for him. In every private affair, in every public transaction, one principle guided him. The purity of his motives, and the disinterestedness of his actions, have by no means yet been duly acknowledged; had those who opposed him and vaccination known how little of selfishness, of vanity, or of pride entered into his character, they would, I am persuaded, deeply lament the wounds which they inflicted; and in the place of bitterness and reproach, would have found cause for unmixed esteem and admiration.”

Jenner was undoubtedly a man of genius. He was possessed of an original and vigorous intellect. His mind was active and inquiring; his perceptions lively, and his judgment, in general, accurate. His imagination was sometimes too ardent, and hurried him occasionally to hasty conclusions. His manners were simple, and unaffected. His disposition was cheerful, benevolent, and confiding; and his piety was undoubted and sincere. He was a devout believer in the omnipresence of the Deity. While pursuing his favourite meditations in early life, on being “the instrument destined to take away from the world one of its greatest calamities,” he says: “It is pleasant to me to recollect, that these reflections always ended in devout acknowledgments to that Being from whom this and all other mercies flow.” “Among the last words he addressed to me,” says Dr. Baron, “not many

days before his fatal seizure, he used this remarkable expression, 'I am not surprised that men are not thankful to me. But I wonder they are not grateful to God for the good he has made me the instrument of conveying to my fellow creatures.' We shall conclude with recording his solemn and final judgment of vaccination, written on the back of a letter a few days before his death.

"My opinion of vaccination is precisely as it was when I first promulgated the discovery. It is not in the least strengthened by any event that has happened, for it could gain no strength; it is not in the least weakened, for if the failures you speak of had not happened, the truth of my assertions respecting those coincidences which occasioned them would not have been made out."

The American Journal of the Medical Sciences.

Edited by ISAAC HAYS, M. D., one of the Surgeons to Will's Hospital, &c. No. XLV.—Nov. 1838. Philadelphia: Lea & Blanchard.

THE American Journal of the Medical Sciences, for November, has just appeared, and contains several valuable articles. We particularly notice Dr. Pennock's description of an anomalous form of aneurism of the aorta, illustrated with two beautifully executed engravings; Dr. Bigelow's paper on Pneumothorax; an article by Dr. Draper, of Virginia, upon a chemical subject, the action of Presence; together with several interesting cases by various contributors.

In the present number of the Journal, a separate division is appropriated to the first of a series of monographs, which are rather too extended for the usual limits of periodicals. The series commences with an able memoir on constipation, by Professor Chapman. With this alteration in the arrangement of its articles, we may notice that the appearance of the journal has been improved by a change in the type, and in its mechanical execution.

We are much pleased to find that the American Journal bids fair to continue its career of usefulness, and that the efforts of its learned editor will be directed to promote the great interests of the profession, and the cause of truth and science. The path so successfully pursued by the American Journal, leads towards the same object as that at which we are aiming; we differ only in the mode in which we seek to attain it. A quarterly journal is better fitted for a certain class of articles than one which appears at shorter intervals. The latter mode of publication possesses the advantage of a more rapid diffusion of interesting intelligence. The plan of the American Journal, and of the Examiner, is sufficiently distinct to enable both

these periodicals to sustain themselves, and to be useful to the profession in their different ways; and while the editors of the Examiner are deeply sensible of the kind reception which it has met with from the profession, they cannot avoid expressing their gratification at the continual prosperity of a journal, with which one of them has been so long and agreeably connected.

THE MEDICAL EXAMINER.

PHILADELPHIA, NOV. 21, 1838.

Our readers will perceive that we continue our reports of the Clinical Lectures delivered at the hospitals of this city during the winter session. The number of students is this year unusually large at both these institutions; and from the increasing interest which they manifest in the study of demonstrative medicine, we may confidently hope, that within a short period it will be regarded as an essential department of medical instruction.

The difficulties which attend this branch of medical instruction are still considerable, but are not insurmountable. They will in a great measure disappear, when its importance is fully appreciated both by the medical profession and the public at large. Clinical instruction cannot be rendered much more complete, until the students of medicine are convinced that a practical familiarity with disease should be attained previously to their entrance upon practice. An attempt to extend the present course of instruction would fail without their active co-operation, for no institution in this country is sufficiently powerful to exact from its pupils a larger sacrifice of time and labour than they are willing to yield. As soon as the students themselves are convinced of the necessity of increased facilities for instruction in any department of medicine, we have no doubt that they will be furnished to them; and although these facilities are of more difficult attainment, as regards clinical medicine, than most other branches of instruction, they may be overcome with patient perseverance.

CLINICAL LECTURES.

PHILADELPHIA HOSPITAL.

THE clinical course, in this hospital, commenced on Saturday, November 10th. Dr. GIBSON opened with some general remarks on the advantages of the mode of instruction in operation in this hospital, and originated, as he said, by himself. To lecture actually at the bed-side, in the ward, we had long since discovered to be a very inefficient means of teaching any considerable body of students. However well this mode might answer

with a class limited to a dozen or twenty, it would not be successfully employed, when the number of pupils amounted to some hundreds, as in the present instance. He had therefore adopted the plan of having the patient introduced into the amphitheatre, where he might be seen by every individual present, to whom whatever remarks the case might suggest, would likewise be distinctly conveyed.

A patient was now introduced with a dislocation of the os humeri into the axilla, of eighteen days standing. The man had had a similar dislocation upwards of two years ago, caused by a fall from a hay mow, upon his hand. It was restored in the usual way, but had left a disposition to a return of the accident: the rupture in the capsular ligament remained a permanent slit, through which a slight cause, such as a preternatural elevation of the arm, would tend to make the head of the bone slip. In one instance, he had reduced a luxation *fourteen* times, in the same individual. These secondary luxations are commonly easy of reduction, from the same cause which induced the liability to their occurrence. A first luxation is much more difficult to reduce; and experience has proved that certain circumstances may arise, after the lapse of time, which renders it an exceedingly dangerous operation.

The reduction of the luxation was now attempted by simple extension with the hand, and the heel in the axilla. This was kept up for seven minutes, without success. Extension was afterward effected by a towel bandaged to the fore arm. Dr. Gibson stated that the luxation originally into the axilla, had been now converted into one forward under the pectoral muscle. It was reduced in two minutes, by the means mentioned. Owing to the wasting away of the deltoid muscle, the accident having been of near three weeks standing, the roundness of the shoulder was not entirely restored.

DR. JACKSON followed Dr. Gibson. He stated that the course of lectures on clinical medicine, would be given by himself, in conjunction with Dr. Gerhard. Before taking up his particular subject, he wished them distinctly to understand the position in which he and the other lecturers stood before them. They were not there as professors of any school, but they had been selected as physicians of Philadelphia, and not from their connection with this or that college, or university. The institution of clinical lectures in this hospital, was the result of a voluntary organization on the part of the physicians and surgeons. They had no peculiar interests to serve from this course, nor did they derive from it any direct pecuniary advantage. He had been lecturing there for fifteen or twenty years, in which period the managers had, he supposed, received some twenty thousand dollars from this source, and yet he and his colleagues had not received so much as a vote of thanks. On the contrary, the managers seemed to think that they conferred a favor by permitting them to lecture, not that they received one from their gratuitous exertions.

The next point to which he should call their attention, was the nature of the instruction which

they came there to receive. Clinical differed from didactic instruction, in its demonstrative character. When properly conducted, its object was not to give the history, general character, and symptoms of a disease, but to confine the attention of the class to the particular case under notice. That case was the sole subject of examination, and the views of the lecturer were to be given with regard to the diagnosis, prognosis and treatment of it. But, for this purpose, it was necessary that the case should be followed out by the student from day to day. This, the distance of the hospital from town rendered incompatible with their other pursuits, and, hence, it was impossible to give them a purely clinical course. It must be necessarily of a mixed character, consisting of a general lecture, upon a given subject, to be afterwards illustrated by such cases as the hospital afforded. He could not but regret this unfortunate drawback upon their clinical instruction, and that they had not a hospital better situated, and under the management of the profession. He considered one of the greatest wants of the day to be a hospital under the sole control of the medical profession, which he hoped, before a very long time, to see established.

The next point to which he should allude, was the *character* of the patients who entered this hospital, and consequently of the instruction which was given there. They would not often witness acute diseases in the wards of the hospital; the great mass of the cases there were chronic, and might, perhaps, at first sight, seem to them of inferior interest. But this was a mistake; they were of greater value to them than many with which they might be at first more struck. They were the cases of every day occurrence; they were met with daily by the physician, and, when they came to practise themselves, they would understand their value. They were of vastly more importance than the rare and uncommon cases; and they would find, that of the first class of cases this hospital afforded an abundance.

In the examination of the cases which came before them, Dr. Jackson said that he would chiefly dwell upon the diagnosis, or the mode of determining the peculiar character of the affection. This was the most important point connected with the examination of disease. Before they undertook to cure, they must know what they had to cure. A knowledge of diagnosis was based upon a knowledge of anatomy and physiology. They could not know when an organ was diseased, unless they knew what were its structure and function. Let them make themselves thorough masters of anatomy and physiology, and they would have no difficulty in understanding the derangements of organs and functions, of which they knew the healthy conditions. Diagnosis includes many important points. Among them are the causes of disease, and the symptoms by which it is known.

It is our object, to-day, to present you with a number of cases of different varieties of disease, affecting various organs of the body, and all characterized by appropriate symptoms. You will then acquire a general idea of diseased action, and will be better qualified for entering upon the study

of the individual affections of which we shall speak at greater length in a subsequent part of the course.

The first class of affections, which we present to you, are the cerebral diseases. You have here two striking cases of hemiplegia, following apoplexy; and one of chronic meningitis. Last week we had several interesting cases of inflammation of the brain, but we have none at present in the wards. One of the cases of hemiplegia occurred in a lunatic in the asylum; the patient was found one morning speechless, and in a state of almost complete stupor; after free cupping and purging, he recovered from the stupor, but remained in the condition in which you now see him. His left arm and left leg are completely paralyzed, and fall by their own weight; the skin on that side of the body is completely insensible, and its temperature approaches more nearly to that of the external air, than that of the right side. His mouth is slightly drawn to the right side, in consequence of the paralysis of the muscles of the left side of the face. These symptoms are permanent, the only change which has occurred in them, since the admission of the patient, is a certain degree of stiffness in the joints, which, in part, results from their having been at rest for so long a time, and, in part, from a real spasmodic contraction of the muscles. The pathological lesions connected with this series of symptoms, are equally constant; we know from experience that they consist in hæmorrhage into the right hemisphere of the brain; that is, the one opposite to the paralyzed limbs. A clot of blood has been effused into the optic thalamus, or corpus striatum, and is in gradual process of absorption. It will finally be removed, and will be replaced by a mass of cellular substance, or by an organized cyst, lined by a regular serous membrane. The stiffness is a subsequent symptom, occurring after the hæmorrhage, and depends upon inflammation and softening of the cerebral substance immediately surrounding the clot. The same patient offered us, last week, a change in the character of the symptoms; he became dull, almost relapsed into his former stupor, and his face was suddenly flushed. The brain then became the seat of active congestion, or a sort of false apoplexy, or "*coup de sang*," as it is called by some of the French writers. This sudden congestion required active treatment, and quickly disappeared after a free cupping and purging.

The second patient represents the same form of disease in a milder degree. He was at work in a blacksmith's shop, more than a twelve-month ago, when he suddenly found that he was incapable of raising his right arm; he had had no headache, vertigo, or other premonitory sign. Ever since that period he has walked with difficulty, and has been quite unable to use his right arm. He speaks in a thick and faltering tone, but his articulation is much more distinct than that of the patient just presented to you; you may observe that the paralysis is less complete in the leg than in the arm; this difference is usually observed in hemiplegia. Some patients lose the use of one arm, but can still walk, or if the hæmorrhage be less abundant, there is a mere numbness and imperfect motion of one arm without entire paralysis. The countenance

of this patient is scarcely distorted, there is merely a dull, stupid expression, dependent upon the paralysis. He will recover almost entirely; the last patient is incurable. This difference in the prognosis depends, as you will afterwards perceive, almost entirely upon the quantity of blood effused. If it be small in quantity, the wound in the brain may be entirely healed; if the quantity be very considerable, an incurable mischief is done to the substance of the brain, and the patient never recovers.

The third case of cerebral disease, is offered by the third patient, who is labouring under chronic meningitis. He received, about thirty years ago, when a lad of sixteen or seventeen years of age, a blow upon the head. Since that period he has been subject to dizziness and headache; his mind has gradually become weaker, and he became conscious of an inability to reflect with his usual clearness. About three months since, he entered the ward with the symptoms just enumerated, and also laboured under commencing paralysis; he staggered in his gait, and the strength of both arms was considerably impaired. There was a little difference on the two sides of the median line, but still the paralysis was not confined to either; there was not hemiplegia, as in the other cases. Within the last few days only, the intellectual symptoms, if we may use the expression, have increased. He has become quite delirious, talks wildly and incoherently, leaves his bed at night, and is permanently insane. The disease has, in the present instance, followed a blow upon the head, but it does sometimes occur without any obvious external cause. From its frequency among lunatics, it is sometimes called the paralysis of the insane, and you will find that it is described very carefully by Calmeil.

We next offer you examples of thoracic disease. The first patient is, you perceive, a young woman, who labours under pericarditis. Her countenance is pale, with a bluish tint at the lips and nostrils; she breathes with difficulty, and has a short dry cough. These symptoms are not peculiar to diseases of the heart, they may belong to those of the lung; we distinguish between them by the physical signs. In the present instance, there are prominence of the præcordial region; flatness on percussion, as you may perceive by listening attentively while I tap lightly on my finger laid over the heart, and the signs derived from auscultation, to which we need not refer at present.

As examples of diseases of the lungs, we offer you several cases of phthisis; you perceive that each of these four patients has cough, fever, emaciation, and expectoration of mucous, or of mucopurulent matter. The young woman has more fever than the others, and presents upon her cheek a circumscribed redness, which arises from the fever in this disease, as soon as it assumes the character of hectic. These are all chronic cases of diseased lung, and we select them in preference to cases of emphysema, or chronic bronchitis, because their symptoms are more intense. We have but few examples of acute disease of the lung during the present mild weather, and it is better for us to wait until cases which are well characterized enter the hospital.

Abdominal disease is usually recognised by signs, as distinctive as those of the other cavities of the body. We present to you several instances of the kind.

Of dysentery, we have numerous examples during the summer and autumnal months. The commencement of the colder weather has rendered these cases comparatively rare. The patient now before you is already convalescing; nevertheless you may still observe some of the traces of the disease in his countenance. He is haggard, his skin is of a dusky hue, there are deep furrows on each cheek, and the corners of the mouth are drawn downwards. There is nothing of the disturbance of the intellect, the altered eye, or of the lesion of mobility or sensibility, which you remarked in the cerebral cases, neither have you the dyspnoea, the flushed cheek, cough, or expectoration, noticeable in the cases of disease of the thorax. The expression about the countenance, consisting in the drawing down of the corners of the mouth, is in some degree dependent upon the nausea which the patient suffered during his illness; in which he presented the common complication of gastritis, together with the dysentery. Although the disease has in a great measure ceased, we still have the traces of it very evidently remaining behind.

The next two patients offer other indications of severe abdominal diseases. One is labouring under an enlargement of the liver; his mind is so much affected as to render him quite insensible to our remarks. The history of the case is very imperfect, in consequence of the feeble condition of his memory and intelligence since his admission. We learned, however, that he had been ill with diarrhoea for nearly six months, during which period he had scarcely been sober. The disease of the liver arises, therefore, from two causes, either of which is sufficient to produce it—the chronic irritation of the colon, and habitual intemperance. At his admission, there was already a decided yellow tint of the skin; but in a day or two afterwards it became much more marked than it had previously been. About the same period there were symptoms of delirium tremens, which obliged us to transfer the patient to the cells. These symptoms soon subsided, but the intelligence of the patient was not restored; his memory was entirely lost, and he presented a slight form of delirium, with muttering and stupor, of a similar kind to that which is frequently observed in the latter stages of meningitis. We did not, however, regard the case as one of true inflammation of the membranes of the brain, because we had already sufficient evidence of disease of the liver from the enlargement and tension of that organ, as well as the jaundiced hue of the skin. We were aware that the cerebral symptoms were a frequent, if not a regular, accompaniment of the severer grades of jaundice, and that they arose, in all probability, from the admixture of bile with the blood. An analogous kind of delirium occurs also in renal disease, and probably depends upon a similar cause—that is, the mixture of the principle of urine with the circulating fluids. The case is a remarkable one, and well worth your careful study.

The last case of abdominal disease which we shall show you to-day, is offered by the patient

who is labouring under ascites. He was about a year since in the surgical ward; an operation was performed for the removal of a fungus hæmatoides from the head. The wound healed without any untoward accident. Diarrhoea had supervened during his residence in the surgical ward; and after the cure of the external disease, he was transferred to the medical ward, where the diarrhoea was speedily arrested by very simple treatment. The patient became well enough to leave the hospital, and continued at ordinary labouring work for several months. His health began to fail him about eight weeks before his entrance, and within the last four weeks he suffered much from wandering pains in the back and abdomen. The swelling commenced about three weeks since—that is, it became considerable enough to be perceived by the patient about that time. I shall not detain you upon the symptoms of the disease, but will merely point out the haggard, contracted countenance, and anxious expression of the patient. The obvious disease is, of course, the effusion of liquid in the abdomen; which, as you perceive, is enormously distended, and yields, on tapping it lightly, an evident fluctuation. By resorting to another means of examination, percussion, we are not only able to prove that the peritoneum is distended with liquid, but to point out the line of division between the liquid and the gas contained at the upper part of the abdomen. The latter means of examination is of much importance in practice.

These cases are all sufficiently characterized, and may give you some idea of the mode of examination, and of the various expressions of diseases; all minute details are purposely omitted, and would, of course, be misplaced in a general lecture.

At the conclusion of the lecture, a demonstration was made by Dr. Gerhard of the pathological changes observed in a case of pulmonary consumption. The disease had been of several years duration; but the immediate cause of death was diarrhoea, which had occurred some weeks previously to the termination of the disease. The mucous membrane of the colon was ulcerated throughout its whole extent, but there were no tubercles in any portion of the intestinal canal. Tubercles were very numerous throughout the whole of the lungs, and at the apex of the left there was a flattened cavity, an inch and a half long, extending across the lung, at a little distance below the stomach. This cavity was lined by a hard membrane, and evidently of long standing, and admitted air with so much difficulty, that cavernous respiration and pectoriloquy did not exist until the patient was made to cough very forcibly.

CLINICAL REPORTS.

PENNSYLVANIA HOSPITAL.

List of Cases treated in the Surgical Wards of the Pennsylvania Hospital, and discharged between November 1st and 15th, 1838. Dr. T. HARRIS, Attending Surgeon.

[Reported by HENRY H. SMITH, M.D., Resident Surgeon.]

A CASE of reducible inguinal hernia of the right side was admitted November 2d; reduced imme-

diately by taxis; truss applied, and the patient discharged the same day.

A case of severe contused wound of the back of the hand, in a girl of twelve years of age, caused by the hand being drawn in between two cog wheels, was admitted on the 15th of October. The integuments over the metacarpal bones were lacerated for about two inches, but there was no fracture. The hand and arm were loosely bandaged on a splint, and lead water applied. This dressing was continued for seven days, and prevented any sloughing of the contused part. The wound afterwards was treated as a simple ulcer, and the patient was discharged cured on the 3d of November, with the perfect use of the hand.

A case of severely lacerated wound of the hand, in a young man of eighteen years of age, caused by a load of shot passing through the second and third metacarpal bones, separating them nearly to the wrist, was admitted on the 9th of October. The case did remarkably well, and the patient was discharged on November 7th, with nearly the perfect use of his hand. The treatment will be reported hereafter.

A case of severe burn of the whole body and extremities, of a child of eleven years of age, caused by the clothes taking fire, was admitted on November 4th. The patient was wrapt in raw cotton; an anodyne given, and warmth applied to the extremities; delirium ensued, and death within twenty-four hours.

A case of lacerated wound of the fleshy part of the forearm of a man, caused by the bite of a dog, four days previous to his entrance, was admitted on November 1st. The wound was poulticed, placed on a splint, and treated, as a simple ulcer, by perfect rest. The wound healed, and the man was discharged six days after admission.

A case of sprained ankle, in a black woman, caused by a slip from a step, was admitted October 8th. There was considerable heat and excessive pain about the joint. The limb was placed at rest in a fracture box; lead water applied; and the patient not allowed to move until five days before her discharge, when a firm bandage was applied, and motion permitted. Discharged November 7th, thirty days after admission.

A second case of sprain of the ankle-joint in a man, caused by a twist of the foot in walking, was admitted October 17th. There was great effusion and heat about the joint. The limb was placed at rest, cold applications made to it constantly, and four dozen leeches applied in the evening. The same course, as to motion, was pursued in this case, and the patient discharged cured, November 14th,—one week after he began to use his crutches, and twenty eight days after admission.

A case of fracture of the neck of the thigh-bone, in a man sixty-six years of age, caused by a fall, was admitted April 2d, 1838, four days after the accident. He had been treated in the city for rheumatism, and the fracture was not detected until the day before his admission. The joint was much enlarged, and the limb shortened about an inch and a half. The patient was placed in bed, and Desault's apparatus applied for a week, with a view of bringing the limb to its original length, and keeping it more entirely at rest. Sloughing

of the heel, and also of the outer side of the foot, followed, caused by the extending band, and the air of the ward, which, at that time, caused all the wounds to take on a bad appearance. The limb was then placed loose on a double inclined plane; stimulating and common poultices applied, with occasionally a wash, composed of fifty drops of pure nitric acid to the pint of water. The ulcers did not heal until the last of September, and the patient was confined to bed until October 14th, when he was allowed to use crutches. Liniments, &c., were afterwards used, and a firm bandage applied all the way up. Discharged on the 10th of November; limb partially useful, but considerably shortened.

A case of extensive wound of the upper part of the thigh, caused by a blow from a large piece of stone, which was thrown through the window of a house in the neighbourhood of a quarry, was admitted October 12th; treated by poultices and rest; after the slough separated, dressed as a simple ulcer, and discharged cured, November 7th, twenty-six days after admission.

A case of fracture of both bones of the leg, was admitted October 2d; treated in the usual way, and discharged at the request of the patient, the bones being quite firm, November 10th, forty days after the accident.

The case of fracture of the thigh, mentioned above, occurred in an old drunkard formerly in the alms-house. The extension made was slight, and would, in most instances, have been borne without injury, but owing to the bad constitution of the patient, and the tendency to hospital gangrene, prevalent at the time, it caused an exceedingly troublesome, ill-conditioned sore, the discharge and irritation of which strongly affected the patient. All attempts, therefore, to treat the fracture were given up, the limb was placed in any manner most comfortable to the patient, and the main part of the treatment directed to the ulceration.

Case of Amputation of the Thigh for a compound fracture of the condyles of the femur.

Samuel C—, æt. thirty-two years, was admitted, October 2d, 1838, for a compound fracture of the thigh. Whilst riding on some rail road cars in the neighbourhood of the city, he slipped, and was jammed between the one he was on and the one following, or fell under the car,—could not tell which. He was brought to the hospital the same evening. On his admission there was found a lacerated wound, an inch and a half long, on the inside of the thigh, about two inches above the patella, merely through the integuments, separating them from the fascia underneath, and extending from the saphena vein round to near the back part of the thigh. Considerable venous hæmorrhage occurred, probably from the saphena, as the wound was directly in its course. A small piece of bone, a half inch square, was found adherent to the skin, just above the upper edge of the wound, and there was also a small lacerated wound of the inside of the leg, and an excoriation on the outside of the other foot. The wound was drawn together by adhesive strips, lint wet with the white of egg applied over these, with the view of forming an artificial scab, and the limb bandaged and placed in

a fracture box. Considerable hæmorrhage took place in the night, which was stopt by a compress over the saphena vein below the knee. Ordered laud. gtt. xxx.

October 3d.—Dosed through night; has not much pain; great heat and swelling around the knee-joint; little fever; pulse soft; skin pleasant; diet, beef tea, and the following mist.: R. G. assafœt. ʒij., tinct. opii. ʒiss., aquæ ʒiv., ft. mist. ʒss. q. h. h. In the afternoon a consultation of the surgeons of the house was held, and agreed to meet to re-examine the limb next morning; dressings and diet continued.

4th.—Slept well; no pain; apparent disposition in wound to unite; symptoms good; water drawn off by catheter, owing to his being unable to pass it whilst on his back. Consultation ordered anti-phlogistic treatment to the part.

9th.—Since last date has been doing well; no great heat about the joint; little pain; slight fever; sleeps well; wound sloughing at the edges; tongue moist, but slightly furred. Continue treatment.

22d.—From the last date wound has done remarkably well; the granulations look healthy, and the sloughs of the integuments are separating; there is considerable inflammation around the joint, with some fever.

29th.—Sloughing has continued since last date, more or less; patient has night sweats, and hectic fever; knee-joint opened by the sloughs, and the parts above the wound are much inflamed; dressed with poultice and bran in a fracture box, to catch the discharge; tenit-sapo camphorat applied to parts above the wound. Full diet and porter.

From this time, until November 5th, there was no material change, when an abscess formed and opened on the outer side of the knee; diarrhœa came on, and the patient's constitution was becoming seriously affected by hectic. A consultation of the surgeons, Drs. Harris, Randolph, and Norris, decided, therefore, on amputation; which was performed by Dr. Harris on November 7th, by the common circular method.

November 14th.—The stump was dressed to-day for the third time; the upper edge has united, and the whole surface is healthy. The patient's constitution has improved since the operation, and he is now doing well.

A dissection of the limb, after the operation, showed a fracture between the two condyles of the femur, extending up to an oblique fracture of its shaft, and the piece of bone spoken of as found at the upper part of the wound, was a piece of the internal condyles, which had been forced up from the pieces on each side of it.

DOMESTIC SUMMARY.

Dr. Glizer on Dysentery.—Some interesting remarks on this subject have been communicated to us by Dr. E. W. Glizer, of Mercer, Pa. The press of clinical matter, which is just now accumulating upon our hands, obliges us to condense this paper, from which we, however, extract some valuable information. "Dysentery," Dr. G. says,

"is a very common epidemic in Mercer county; in the months of August and September, it is emphatically the terror of this section. During eight years that I have been in practice here, no one has passed without the prevalence of this affection to a greater or less extent. In 1834 it was unusually rife. My practice was founded on pathological views similar to those which I hold in reference to cholera morbus, diarrhœa, &c., which always precede dysentery in this region, viz., a cessation of the functions of the liver and skin, and consequent derangement of the digestive apparatus. I gave alternate doses of calomel and ipecacuanha, followed by castor oil, with diluted drinks, and sinapisms over the abdomen. With this practice I had had satisfactory success in the cholera infantum and diarrhœas, which had preceded the epidemic of dysentery; but it utterly failed in the latter, although employed in combination with opiates. The popular practice of burnt brandy, and light doses of castor oil, was by far more successful.

"The next year, I used calomel and astringents, but with little better success, especially with children. The year after, 1836, I used the sugar of lead, with starch and laudanum, containing alterative mercurial doses, and the other adjuvants above mentioned. With this practice, I was more successful. In 1837, I again resorted to opium more freely, and found that, with patients past the age of six years, I could control the disease perfectly; under this age, sufficient doses endangered the brain. * * * * * During the late prevalence of dysentery, my practice has been to give alterative doses of calomel with rhubarb and magnesia, till the stools became bilious; then to substitute Dover's powders. I used brandy as a stimulant, with starch and laudanum injections, demulcent drinks, &c., and milk diet. Opium was freely given till it checked the tenesmus, and the calomel persevered with till the gums were touched. Afterwards, I substituted small doses of tartar emetic and nitrate of potash, avoiding nausea, but keeping the patient in a profuse perspiration. With this practice I had entire success. * * * * *

"In one case of dysentery, which had become chronic, and had returned repeatedly after apparent cures, and to which I was called in a neighbouring town, and had under treatment when I received the Examiner, containing Dr. Meig's remarks on Mr. Hope's camphor mixture, I gave the mixture with immediate and entire success."

[In the formula for Hope's mixture, p. 286, No. 18, for T. opii., gtt. xi., read gtt. xl.—We shall be glad to have the report of the case Dr. G. speaks of.—Eds.]

M. DUGES, Professor of Clinical Surgery at Montpellier, has just died of typhus fever, at the age of 41 years. M. Duges was well known in this country through his work on the diseases of the uterus, written in conjunction with Madame Boivin. He was also the author of an "Elementary Treatise on Midwifery," and of several excellent articles in the "Dictionary of Medicine," and periodical journals.